

ABSTRACT

A transverse longitudinal-cylinder sewing machine includes an automatic thread loosening device, a tension adjustment mechanism, an automatic thread cutting bi-directional solenoid device and a differential fabric driving teeth displacement control device. The differential fabric driving teeth displacement control device consists of a primary transmission mechanism, first and second push mechanisms, a rocking mechanism, first and second adjustment mechanisms that are co-axle, and first and second fabric driving mechanisms located inside a cylinder normal to the co-axle. The second push mechanism has a linkage arm coupled on the co-axle that includes a bearing and a cam. The cam can generate eccentric movements to form an independent driving operation. The axial direction of the cylinder is directed towards the operator so that the axis of the cylinder is normal to the entire transverse work station of the sewing machine.